

**IN THE CLAIMS:**

1-69. (Canceled)

70. (Currently amended) A method for determining whether a test compound is a hepatotoxin, comprising:

(a) exposing liver tissue or liver cells to the test compound;  
(b) preparing a normalized gene expression profile of at least ten genes for said liver tissue or liver cells, wherein the gene expression profile contains the differential gene expression levels for said at least ten genes upon exposure to the test compound, and wherein said at least ten genes are listed in one of Tables 5A-5WWW;

(c) comparing the gene expression profile to a hepatotoxicity model, the hepatotoxicity model comprising:

- (i) ~~the~~ normalized mean expression levels of said at least ten genes in liver tissue or liver cells exposed to a known hepatotoxin,  
(ii) ~~the~~ normalized mean expression levels of said at least ten genes in unexposed liver tissue or liver cells not exposed to a hepatotoxin, and  
(iii) information from one or more of Tables 5A-5WWW; and  
(d) scoring the comparison to determine whether the test compound is a hepatotoxin.

71. (Previously Presented) The method of claim 70, wherein the gene expression profile contains the differential gene expression levels for at least 100 genes listed in one of Tables 5A-5WWW, and wherein the hepatotoxicity model comprises the gene expression levels in said one of Tables 5A-5WWW.

72. (Previously Presented) The method of claim 70, wherein said gene expression profile is generated by hybridization of nucleic acids to a microarray, and is normalized for hybridization conditions, label intensity, and reading efficiency prior to comparison.

73. (Previously Presented) The method of claim 70, wherein the hepatotoxicity model comprises all the information in one of Tables 5A-5WWW.

74. (Previously Presented) The method of claim 70, wherein the liver tissue or liver cells are exposed to the test compound *in vivo* and the hepatotoxicity model is generated by exposure of liver tissue or liver cells to the known hepatotoxin *in vivo*.

75. (Previously Presented) The method of claim 70, wherein the known hepatotoxin is associated with at least one of carcinogenesis, cholestasis, hepatitis, liver enlargement, inflammation, liver necrosis, liver steatosis, and peroxisome proliferation.

76. (Previously Presented) The method of claim 70, wherein the known hepatotoxin is one or more of acetaminophen, 2-acetylaminofluorene (2-AAF), acyclovir, ANIT, AY-25329, BI liver toxin, chloroform, bicalutamide, carbon tetrachloride, CI-1000, clofibrate, colchicine, CPA, diclofenac, diflunisal, dimethylnitrosamine (DMN), dioxin, 17 $\alpha$ -ethinylestradiol, gemfibrozil, hydrazine, indomethacin, LPS, menadione, phenobarbitol, tacrine, thioacetamide, valproate, WY-14643, and zileuton.

77. (Previously Presented) The method of claim 70, wherein the gene expression profile contains the differential gene expression levels for at least 20 genes listed in one of Tables 5A-5WWW, and wherein the hepatotoxicity model comprises the gene expression levels in said one of Tables 5A-5WWW.

78. (Previously Presented) The method of claim 70, wherein the gene expression profile contains the differential gene expression levels for at least 30 genes listed in one of Tables 5A-5WWW, and wherein the hepatotoxicity model comprises the gene expression levels in said one of Tables 5A-5WWW.

79. (Previously Presented) The method of claim 70, wherein the comparison is scored by determining whether the test compound induces a change in expression of the at least 10 genes in the same direction as the known hepatotoxin.